

HELENA SMELTER

A Pen Picture of One of the Most Complete Smelting Works in the World.

The Entire Plant of the Most Approved Pattern, the Outgrowth of Ripe Experience.

All the Important Machinery Duplicated. So no Ordinary Accident Will Delay Operations—The Daily Capacity.

The last number of the New York Financial and Mining Record contains the following article from the pen of John W. Eddy, of Helena: "I have just visited the Helena & Livingston smelter and noted a few items which many of your readers will be interested to know. The plant is now nearly complete, as at first planned, and presents an imposing appearance with its many buildings, some of which are quite large. The reverberatory building is 325 feet long by 77 feet wide, and the one containing the blast furnaces is 120x60, and the roof which covers the boilers, brick-work over the crusher rolls, etc., are spacious, and when you add to this the large brick office, and the assay office, also of brick, with the assayer's office, and other structures appurtenant to the plant, you have almost a city by itself, and I don't believe it took less than \$500,000 to put the plant in order for work, and now it is in operation not less than twice as much additional is requisite to enable the works to handle the immense quantities of ores offered them for treatment. At present there are three stacks running, each having a capacity of seventy tons per twenty-four hours, including fluxes, but the net ore smelted is fifty tons per day each, or 150 tons for every twenty-four hours for the three. Before this week is over the fourth stack will be at work, when not less than 200 tons of ore will be smelted per day. Five large reverberatory furnaces, each having a daily capacity of eight tons, are now used in the roasting of ore, and one slacking furnace, which will smelt the same quantity of ore, and also an equal quantity of fluxes, are constantly at work. Two other slagging furnaces are ready for work whenever occasion may demand, and also two large bucket elevators of ten tons capacity each. It was at one time intended to double the number of roasters, but such a large percentage of ores that do not need roasting have been received at the works as to render enlarged facilities in this direction at present unnecessary. Everything about this entire plant is of the most improved pattern, and is the outgrowth of ripe experience and scientific skill. Care that run pendant from an overhead track take the ore and slag from these reverberatory furnaces out to the bins with a rapidity and ease of handling that is a vast improvement upon the old fashioned wheelbarrow. The mixing or charge floors are on a level with the feed openings of the stacks and the charge is merely shoveled into a large opening in the floor, instead of a hole in the side of the stack, as in the old-time furnaces. Three large blowers are now in use for the furnaces, and the fourth will be called into use as soon as the remaining stack is blown in, and one large blower is always ready to take the place of any one which by accident may be disabled. A contrivance made by Prof. Hatt, the superintendent, carries the fumes that always rise from the slag-pot out of the building, so that there is no fear of the workmen coming loaded, or disagreeably affected by the smoke. Over each slag-pot is a large hood which connects with a large galvanized iron pipe at the end of which is a powerful suction fan, and the current of air induced into this pipe is strong enough to carry smoke and fumes away almost entirely. The furnace-blast is maintained by means of a 25-horse power engine, with a boiler capacity behind it amounting to 300 horse power. Of the eight boilers in position, about one-half are fired. Since the 1st day of February last, when the first carload of bullion was shipped, 161 carloads of 20,000 pounds each have been shipped, and now that the plant is operating well, two carloads, or 40,000 pounds, leave the works every day. There are four crushers and two pair of rolls in the crushing department run by a 60-horse power engine. One of these crushers breaks up 30 tons of iron-ore, or 20 tons of copper-ore, in 2 1/2 hours, or it chews up the calcareous foot at the rate of 20 tons per hour. The coke used by this company is all made in their own ovens at Cokedale on the N. P. railroad, and the capacity, now 45 tons daily, is to be increased to the extent of 20 tons more in order to fully supply this smelter as well as the smelter at Wickes which is now an adjunct of the Helena & Livingston Smelting & Reduction company. A coal-washer is now being put up at Cokedale to enable them to clean the coal and make the entire mine product saleable. The three stacks at Wickes are now running in fine shape on the concentrates made at Corbin, and turn out about one carload of bullion per day. The concentrator at Corbin produces about 1,000 tons of concentrates per month, and at present none comes to Helena, as all the lead required is produced from other sources. Every appliance which human skill can suggest and ample capital secure to make the Helena plant strictly first-class in all its appointments, has been laid under tribute. Two dynamo furnaces are and incandescent electric lights. Even the pumps are duplicated. When one pump may need repair another is always ready, and if both should fail an injector can be instantly connected for boiler use. Two immense wells supply water for the water jackets, and the tanks are being used exclusively for the protection of the works against fire. This plant is under the superintendence of A. Rahr, who has all its diversified interests as well in hand as if it were a small affair. He is an accomplished metallurgist, a master in metallurgy, a good business manager, and withal a genial gentleman.

Jerry Rusk's Humor. Says a Washington correspondent "Secretary Rusk bids fair to prove one of the most popular members of the administration. His practical good sense and sturdy honesty of purpose are supplemented by a keen sense of humor. He receives more invitations than any other public man in Washington. The other day a visitor at the agricultural department, gazing over the ample grounds in which the buildings are located, turned to the secretary and remarked: "You've got the prettiest place in the city." At course, "Why not?" was the prompt reply. "You know the secretary of agriculture is the tail end of the cabinet, and the tail is a most unattractive ornament. Its principle use is to keep the flies off the other members of the cabinet."

Agony is Courtied. By persons who, attacked by a mild form of rheumatism, neglect to seek prompt relief. Subsequent torture is prevented by an immediate resort to Hostetter's Stomach Bitters. Slight exposure, an occasional draught, will begot this painful malady, where there is a predisposition to it in the blood. It is not difficult to arrest the trouble at the outset, but well high impossible to eradicate it when matured. No evidence in relation to this superb blood purifier is more positive than that which establishes its efficacy as a preventive and a remedy for rheumatism. Not only is it thorough, but safe, which the vegetable and mineral poisons, often taken as curatives of the

disease, are not. Besides expelling the rheumatic virus from the system, it overcomes fever and ague, biliousness, constipation and dyspepsia.

GLADSTONE AND BRIGHT.

How the First Named Bears His Years—Stories of His Old Friend.

London special: In public life the only indication that Gladstone has entered his 80th year is an increasing deafness and a slight huskiness in his voice, which wears off as he talks, and he talks with abounding freedom, though, as some one observed, he is a most attractive listener. One notable thing about his personal appearance is the brightness of his eyes. They are fuller and more unclouded than those of many a man under 50. Mr. Gladstone was dowered with a strong constitution, but all his life he has taken great care of it. Of Mr. Bright he spoke regretfully of the carelessness with which his old friend dealt with himself.

"Bright," he said emphatically, "did nothing he should do to preserve his health, and everything he should not do. It was not only his body, but his mind, that he had only been wise, and wise in time, there is no reason why he should not have been a slave to-day, hale and strong, but he never would listen to advice about himself." Mr. Gladstone told a funny little story about Mr. Bright's habits on this score. Until the last ten years he had no recognized medical attendant. There was some anonymous and unknown person to whom he went for advice, and of whom he spoke graciously. "Bright," said Mr. Gladstone, "that curious approach to a wink that sometimes varies his grave aspect, 'he would never tell his name or say where he lived. About ten years ago Mr. Bright surprised Sir Andrew Clark by appearing in his consulting room. His air and body never to think of his peculiarities in the matter, asked him how it was he came to see him. 'Oh,' said Mr. Bright, 'it's Gladstone; he never will let me rest.'"

"The long and brief had been accomplished, but Mr. Bright acknowledged the immense benefit received, and nothing more was heard of that anonymous doctor."

Mr. Gladstone seems to have acted as mentor to Mr. Bright in other respects than his bodily health. He used to advise him as the one panacea for preserving the health of mind and body never to think of political matters in bed or on awakening in the morning. Mr. Gladstone said: "I have not least political crises I also as current matters entirely from my mind when I go to bed, and I will not think of them until I get up in the morning. I told Bright this, and he said: 'That's all very well for you, but my way is exactly the reverse. I think over all my speeches when I am in bed, like Sancho'

Seven hours he always gets 'sand,' he used to say with a smile. 'I should like to get it getting up in the morning. I hate the same every morning, but once I can do everything by habit, and when I have had my seven hours' sleep my habit is to get up.'"

Excursion Rates Decoration Day.

The Montana Central will make rate of one fare for the round trip to Boulder and return on Decoration Day.

PORTLAND, Ore., March 25.—Having tried the effects of the concentrated extract of Oregon Kidney Tea, we cheerfully bear witness to its beneficial agency in affections of the urinary organs. It is simple, safe and sure; it is easily taken and restores healthy vitality to the organs it is intended to operate upon with assured success. S. J. McCORMICK, Editor Catholic Sentinel.

Sold by R. S. Hale & Co., wholesale and retail agents, Helena.

HOME TESTIMONY. HELENA, Oct. 7, 1887. I was suffering from an unusually bad cough, my lungs were sore and congested, and I consulted one of the best physicians in Helena, whose prescriptions failed to relieve me. I became alarmed, and at the suggestion of a friend purchased a bottle of Acker's English Remedy for coughs, and after taking it according to directions was completely cured. I therefore cheerfully recommend it. JACOB SWITZER.

I had a racking cough and inflamed throat and bought a bottle of Acker's English Remedy upon the recommendation of a friend, and was entirely cured by it. I consider it a never failing remedy for a cough. J. FELDBERG.

Acker's English preparations are for sale in Helena only by R. S. Hale & Co.

Dr. Ho-san-so. In his new discovery for consumption, succeeded in producing a medicine which is acknowledged by all to be simply marvelous. It is exceedingly pleasant to the taste, perfectly harmless, and does not sicken. In all cases of consumption, coughs, colds, whooping cough, croup, bronchitis and asthma in the chest it has given universal satisfaction. Dr. Ho-san-so's Cough and Lung Syrup is sold at 50 cents by R. S. Hale & Co.

Is Consumption incurable? Read the following: Mr. C. H. Morris, Newark, Ark., says: "Was down with Abcess of Lungs, and friends and physicians pronounced me an incurable consumptive. began taking Dr. King's New Discovery for Consumption, am now on my third bottle, and able to oversee the work on my farm. It is the best medicine ever made."

Jose Middlewart, Decatur, Ohio, says: "Had it not been for Dr. King's New Discovery for Consumption I would have died of lung troubles. Was given up by doctors. Am now in best of health. Try it. Sample bottles free at R. S. Hale & Co.'s drugstore."

An Expression of Delight. "About a week ago," says a Los Angeles, Cal., druggist, "a Chinaman came with a lame shoulder. I sold him a bottle of Chamberlain's Pain Balm and guaranteed that it would cure him. He came in again last night, and as soon as he got inside the door began to swing his arms over his head like an Indian club swinger. I thought the blamed fool had a fit, but he finally stopped long enough to say: 'Medicine velly fine, velly fine; alle same make me plenty good.' Chamberlain's Pain Balm is without an equal for sprains, rheumatism, aches, pains or lame back. For sale by H. M. Parthen & Co.

Cure For Piles. Itching piles are known by moisture like perspiration, producing a very disagreeable itching after getting warm. This form, as well as blood, bleeding and protruding piles, yield at once to the application of Dr. King's New Discovery. It acts directly upon the parts affected, absorbing the tumors, allaying the intense itching and effecting a permanent cure. Fifty cents. Address The Dr. Bosanko Medicine company, Piqua, O. Sold by R. S. Hale & Co.

Hucklen's Arnica Salve. The best salve in the world for cuts, bruises, sores, ulcers, salt rheum, fever sores, tetter, chapped hands, chilblains, corns, and all skin eruptions, and positively cures piles, or no pay required. It is guaranteed to give perfect satisfaction, or money refunded. Price 25 cents per box. For sale by R. S. Hale & Co.

When Baby was sick, we gave her Castoria. When she was a Child, she cried for Castoria. When she became Miss, she clung to Castoria. When she had Children, she gave them Castoria.

Be Sure

If you have made up your mind to buy Hood's Sarsaparilla do not be induced to take any other. A Boston lady, whose example is worthy imitation, tells her experience below: "In one store where I went to buy Hood's Sarsaparilla the clerk tried to induce me to buy their own instead of Hood's; he told me their's would last longer; that I might take it on ten

To Get "say's" trial; that if I did not like it I need not say anything, etc. But he could not prevail on me to change. I told him I had taken Hood's Sarsaparilla, knew what it was, was satisfied with it, and did not want any other. When I began taking Hood's Sarsaparilla was feeling real miserable with dyspepsia, and so weak that at times I could hardly

stand. I looked like a person in consumption. Hood's Sarsaparilla did me so much good that I wonder at myself sometimes, and my friends frequently speak of it." Miss ELLA A. GORP, 61 Terrace Street, Boston.

Hood's Sarsaparilla

Sold by all druggists. \$1.00 per box. Prepared only by C. L. HOOD & CO., Apothecaries, Lowell, Mass.

100 Doses One Dollar

OMAHA MEDICAL SURGICAL INSTITUTE.



N. W. COR. 13TH & DOGGE STS. OMAHA, NEB. FOR THE TREATMENT OF ALL

CHRONIC & SURGICAL DISEASES

APPLIANCES FOR DEFORMITIES AND TRUSSES.

Best Facilities Appointments and Regimens for Successful Treatment of CHRONIC & SURGICAL DISEASES.

WHITE ROOMS FOR PATIENTS.

Board and Attendance. Best Accommodations in West.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

WOMEN'S DISEASES.

HEADQUARTERS FOR

PRODUCE AND FRUITS

LEMONS, ORANGES, PINEAPPLES, CALIFORNIA CABBAGE AND NEW POTATOES.

MICHIGAN APPLES, BUTTER, EGGS,

ARRIVING DAILY BY EXPRESS

CHEERRIES AND STRAWBERRIES.

Other California Fruits as Seen in Market.

M. G. COHN & CO

Corner Edwards Street and Park Avenue.

No Goods at Retail.

Calkins & Featherly,

NEXT DOOR TO POSTOFFICE.

Stationery, Legal Blanks Aiken & Lambert

Gold Pens, Blank Books and Memorandums, Picture Frames and Mouldings, Baby Carriages and a General Assortment of Notions,

MONTANA RELIEF

(SANITARIUM AND INFIRMARY.)

Half-way Between Postoffice and Broadwater's Hot Springs, Hauser Avenue.

For the Reception of Patients with diseases of the Eye, Ear, Nose and Throat; for the treatment of Chronic Affections,

And for the treatment of hemorrhoid (piles) and other Rectal Diseases; Stricture and allied disorders; Diseases of the Bladder and Kidneys; all affections surgical and medical of the Pelvic Viscera and Diseases of the Skin. All modern improvements. All private rooms. No wards.

Hot, Cold, Medicinal and Electric Baths free to patients of Sanitarium. Take Motor at either depot for Sanitarium. The site is picturesque, healthy and inviting. Office corner of Main street and Sixth avenue, over Murphy's store, reached by horse car and motor.

For full particulars address

DR. M. G. PARSONS, or

DR. NEBER ROBERTS.

N. B.—Temporary arrangements for patients are made until May 15th, when the Sanitarium will be completed.

Lawns and Gardens.

Lawn Mowers, Lawn Sprinklers and Rakes.

Garden Hose, Hose Stands and Reels

In Great Quantities and Low Prices.

We Make a Specialty of

MOWERS

FOR CUTTING

HIGH GRASS

EXAMINE

Our Stock

BEFORE PURCHASING.

A. M. HOLTER HARDWARE CO

113 NORTH MAIN STREET.

The Pioneer of the Great West.

COSMOPOLITAN HOTEL,

HELENA, MONTANA.

SCHWAB & ZIMMERMAN, PROPRIETORS.

The Oldest, Most Reliable, Leading First-class Hotel in the Territory

ICE, ICE, ICE.

C. A. BLACKBURN

Is the most reliable dealer in the city. Thirteen years in the business.

Office 200 Bridge St. Telephone 110.

SAND COULEE COAL

Does not slack when exposed to the air as most all other soft coal does. A large portion of this coal is similar to Anthracite in character, and does not fill the room with soot. Ask your dealers for the Sand Coulee Coal or apply to S. F. SHANNON, Agt. Office—Montana Central Depot.

H. BARNETT,

—DEALER IN—

HIDES, FUR and WOOL,

HIGHEST CASH PRICES PAID.

Warehouse opposite Northern Pacific Railroad depot, Helena.

NOBLES EXPLOSIVE DYNAMITE

TUDSON'S IMPROVED POWDER

GIANT POWDER

Recommended by Miners, Railroad Contractors, and endorsed by the public in general as the

A. M. HOLTER HARDWARE CO.

GENERAL AGENTS, HELENA, MONTANA.

ASSAY OFFICE

Chemical Laboratory.

A. W. HAND,

Galen Block, Foot of Broadway, Helena, Montana. P. O. Box 711.

LENOIR HOUSE—Steam Heat.

Cor. Main St. and Helena St., Helena, Montana. Every room a first-class front room.

PACIFIC HOTEL, EUROPEAN PLAN.

VIENNA SALESY & RESTAURANT.

Wain street, Helena, Montana. Business center of the city. First class. All street cars pass the above houses. Many restaurants in close proximity at all prices. European Plan. Rooms \$50.00, \$1.00, suite \$1.50 per day according to location. American Plan \$1.50 to \$2.50 per day. Weekly rates. No cheap people allowed. B. U. LENOIR, Prop. both houses.

PACIFIC HOTEL—Steam Heat.

Wain street, Helena, Montana. Business center of the city. First class. All street cars pass the above houses. Many restaurants in close proximity at all prices. European Plan. Rooms \$50.00, \$1.00, suite \$1.50 per day according to location. American Plan \$1.50 to \$2.50 per day. Weekly rates. No cheap people allowed. B. U. LENOIR, Prop. both houses.

ARTHUR P. CURTIN.

Furniture, Carpets, Wall Paper

HOUSE FURNISHING GOODS

Having leased the two upper floors of the Davidson block and connected the same with our already

musical saloon, we now occupy four entire floors extending through the whole block from Jackson to Main street, stocked throughout with goods of every grade and at prices that defy competition. Every purchase made STRICTLY FOR CASH DIRECTLY FROM FIRST HANDS and shipped in CAR LOADS ONLY. An examination of goods and comparison of prices solicited.

Music Department.

PIANOS, ORGANS and MUSICAL MERCHADISE.

NEWSDEALERS. PERIODICALS.

PALACE CIGAR STORE,

E. L. Sliter & Co., Proprietors.

Finest Imported and Domestic

CIGARS AND TOBACCO.

Opposite Grand Central Hotel Helena M. T.

F. S. LANG & CO.,

STOVES, RANGES, CROCKERY,

Glassware,

Refrigerators, Water Coolers,

ICE CHESTS,

LAWN MOWERS, GARDEN HOSE,

SPRINKLERS,

Stone Jars, Wire Fencing,

Ice Cream Freezers,

Woodenware, Brooms, Etc.

ESTABLISHED 1877.

JAS. McMillan & Co.,

PROPRIETORS OF THE

Minneapolis Sheepskin Tannery,

AND DEALERS IN

HIDES, SHEEP BELTS, FURS, WOOL, TALLOW

Ginseng and Seesaw Root.

SHEEP BELTS & FURS A SPECIALTY.

101, 103 & 105 Second St. North. MINNEAPOLIS, MINN.

Shipments Solicited. Write for Circulars.

A. J. Davidson & Co.,

(INCORPORATED.)

AGRICULTURAL IMPLEMENTS,

THE BAIN WAGON.

Carriages, Buggies, Etc.,

Wool Sacks, Twine and Shears,

Concord Buggy & Plow Harness.

OFFICE—Fourteenth Street and Helena Avenue. WAREHOUSE and WAGON YARD—On National Avenue, between Montana Central and Northern Pacific Railroads.